

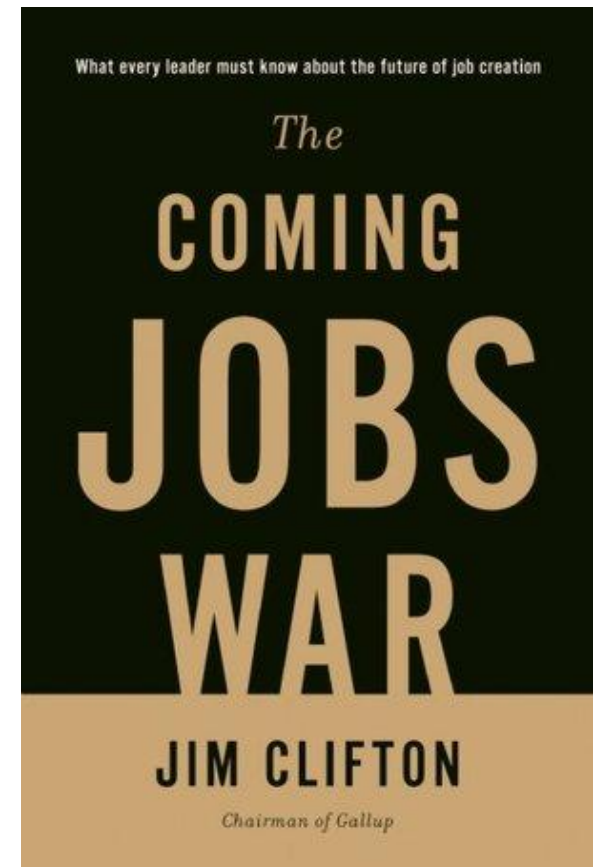
# Building Highly Skilled Teachers and Education Leaders



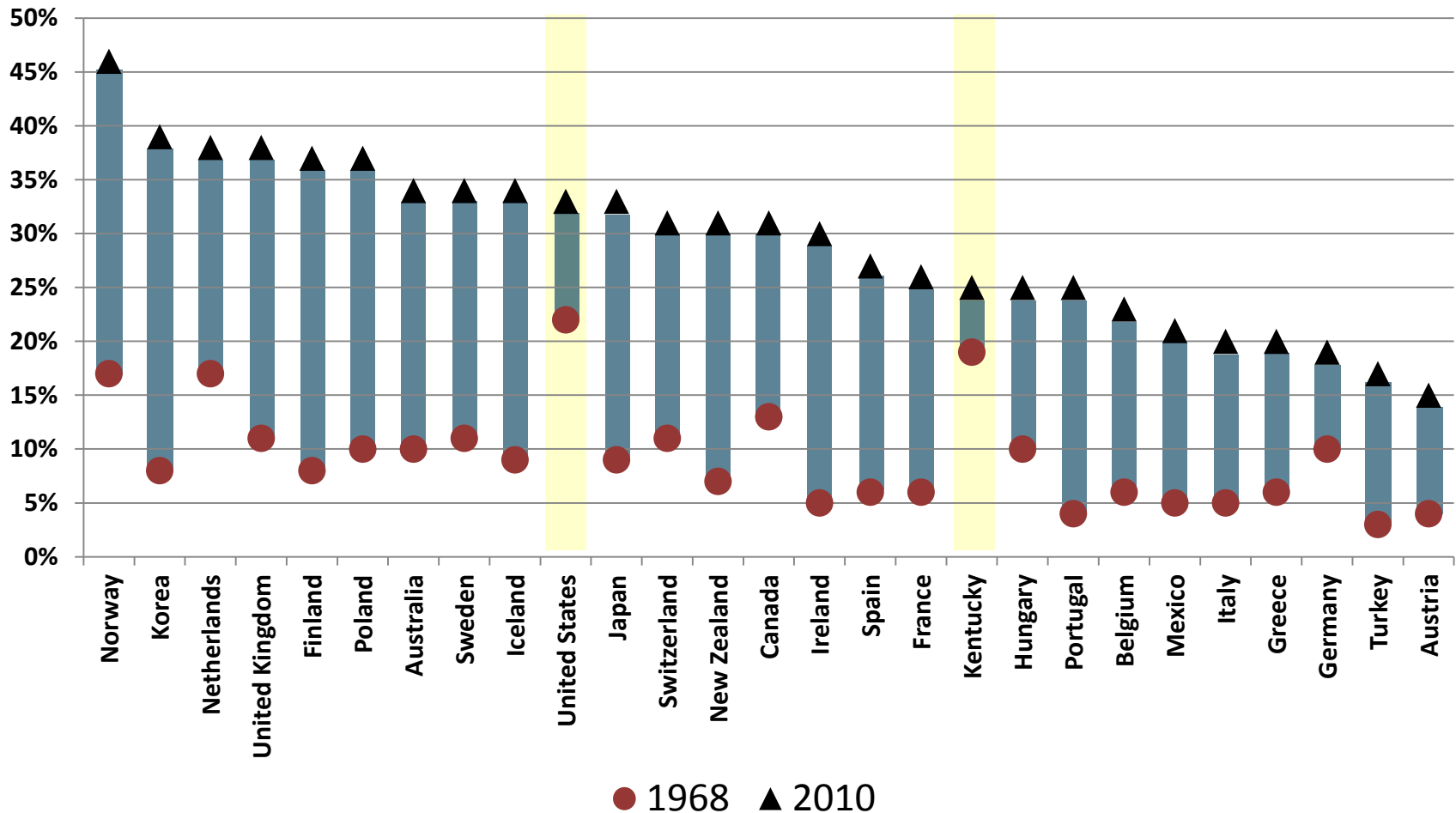
by Robert L. King, President  
Kentucky Council on Postsecondary Education

# A Global War for Good Jobs is Coming.

- 3 billion people reported to Gallup they want a job that consumes at least 30 hours per week, and by implication pays a living wage.
- Only 1.2 billion jobs in the world currently fit that description.
- As the foreign workforce becomes more educated, competition for jobs will be fierce.



# Baccalaureate Attainment, 25-34 Age Cohort, 1968 and 2010



Source: Education at a Glance: 2012 OECD Indicators, U.S. Census Bureau.



# Comparing Performance

## A Sampling of Countries

Reading		
1	Shanghai-China	556
2	Korea	539
3	Finland	536
6	Canada	524
8	Japan	520
14	<b>United States</b>	<b>500</b>
16	Germany	497
17	France	496
19	United Kingdom	494
OECD Average		493
22	Italy	486
39	Mexico	425

Math		
1	Shanghai-China	600
4	Korea	546
6	Finland	541
9	Japan	529
10	Canada	527
16	Germany	513
22	France	497
OECD Average		496
28	United Kingdom	492
31	<b>United States</b>	<b>487</b>
32	Italy	483
46	Mexico	419

Science		
1	Shanghai-China	575
2	Finland	554
5	Japan	539
6	Korea	538
8	Canada	529
12	Germany	520
14	United Kingdom	514
20	<b>United States</b>	<b>502</b>
OECD Average		501
23	France	498
30	Italy	489
45	Mexico	416

65 countries. Rankings based on mean scores; tied mean scores resulted in tied rankings.

Source: PISA 2009 Results: Executive Summary, OECD.



# South Korea's Commitment to Education

Saturday/Sunday, January 26 - 27, 2013 | B1  
EURO \$1.3459 YEN 90.87 See more on B5 and at [WSJMarkets.com](http://WSJMarkets.com)



A Samsung television commercial pokes fun at Apple's iPhone.

## Has Apple Lost Its Cool to Samsung?

BY IAN SHERR  
AND EVAN RAMSTAD

Samsung Electronics Co. is succeeding where other technology companies have tried and failed: closing the coolness gap with Apple Inc.

dez, an Apple iPhone owner who bought a Samsung Galaxy S III smartphone about three months ago after seeing Samsung's ads. "If you see this stuff on TV enough, it gets you thinking," said Mr. Hernandez, a 34-year-old resident of Somerville,

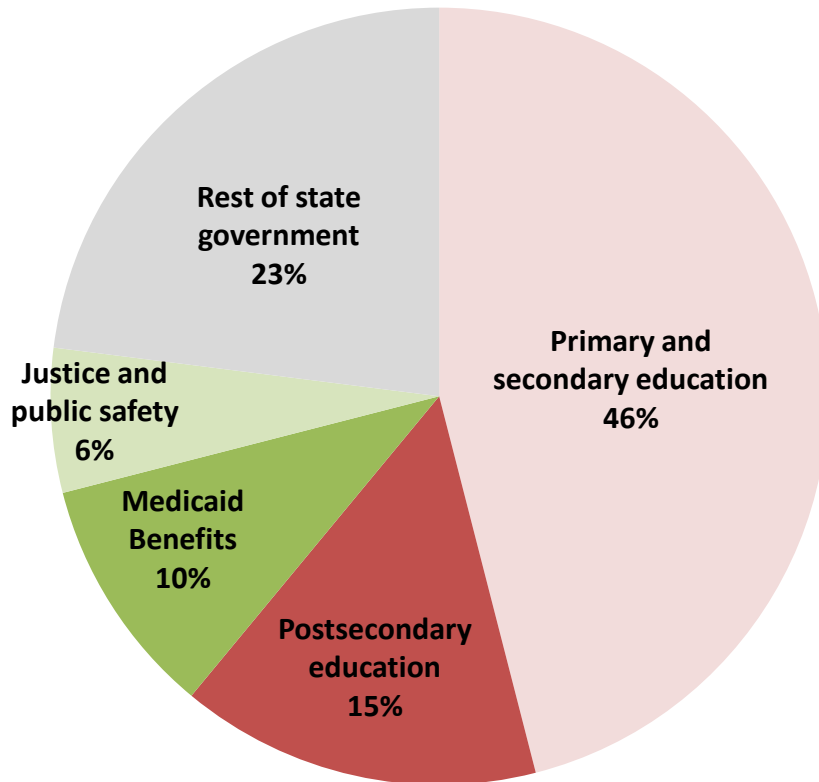


**How are things in Kentucky?**

# State investment in education is losing ground to other expenditures.

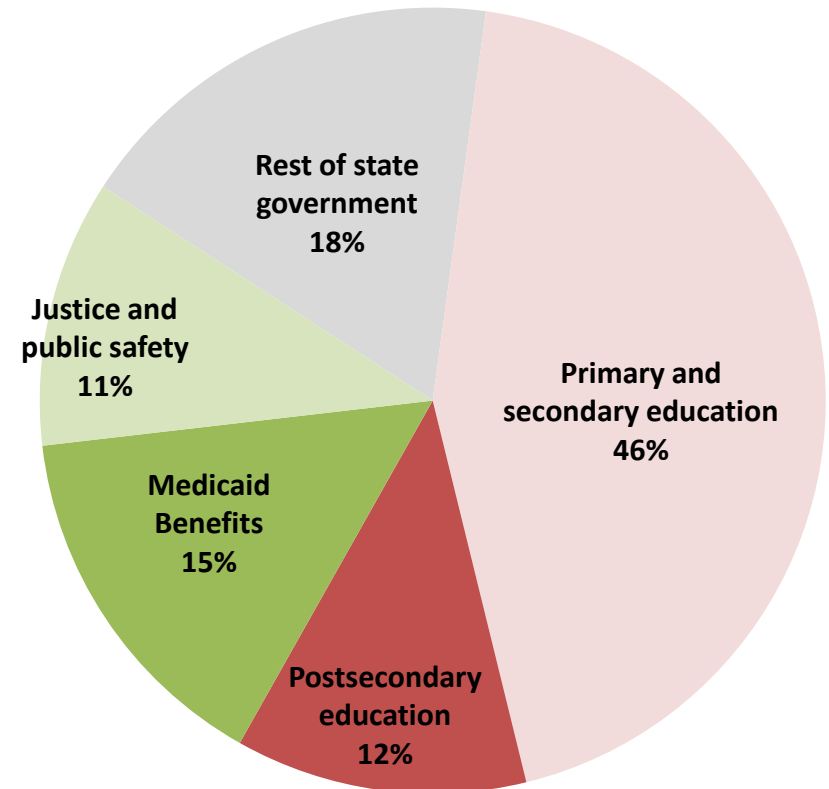
**FY 1999**

**KY General Fund Budget Enacted  
(\$6 billion)**



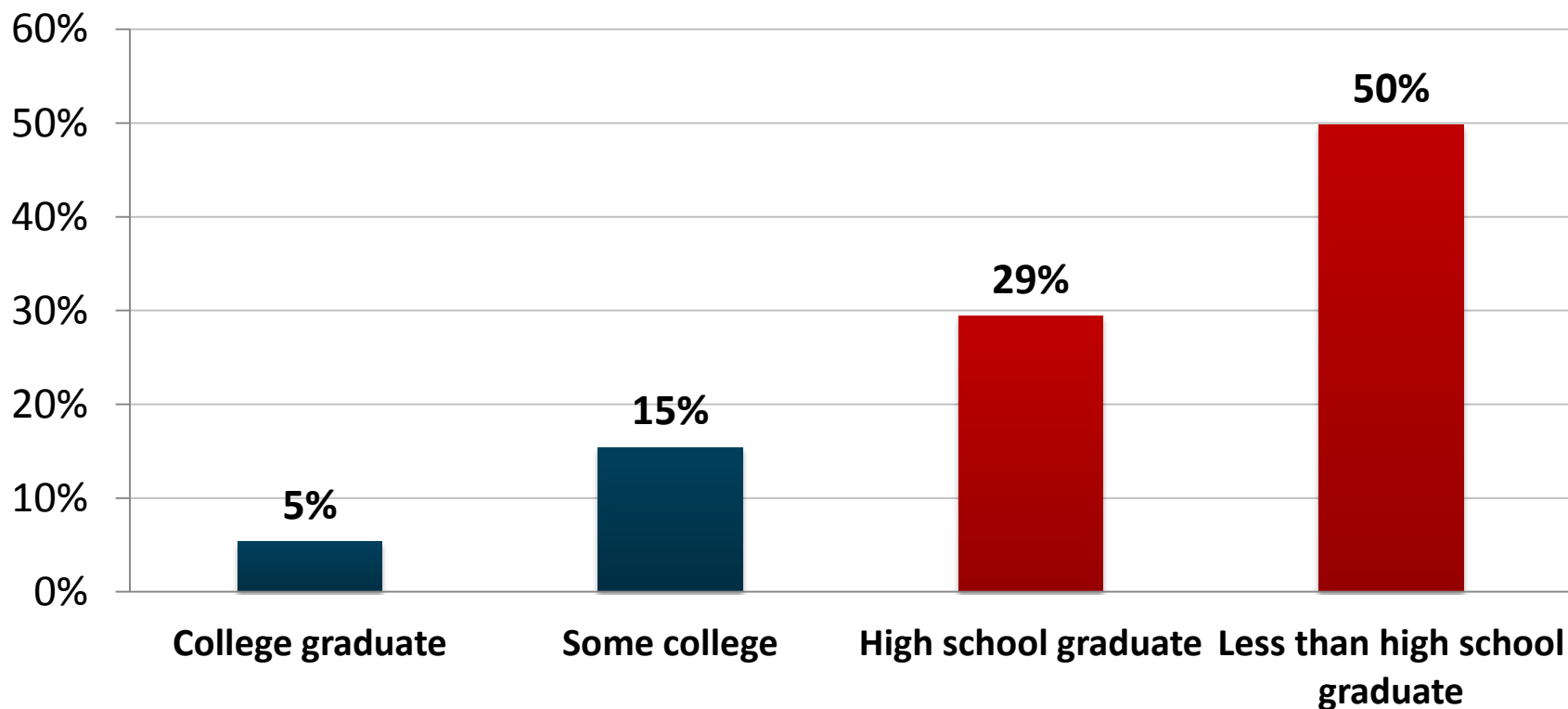
**FY 2014**

**KY General Fund Budget Proposed  
(\$9.8 billion)**



# Incarceration Rates Correlate with Level of Educational Attainment

**Characteristics of convicted offenders, FFY 2007-08**  
(Inmates in state and federal correctional facilities)



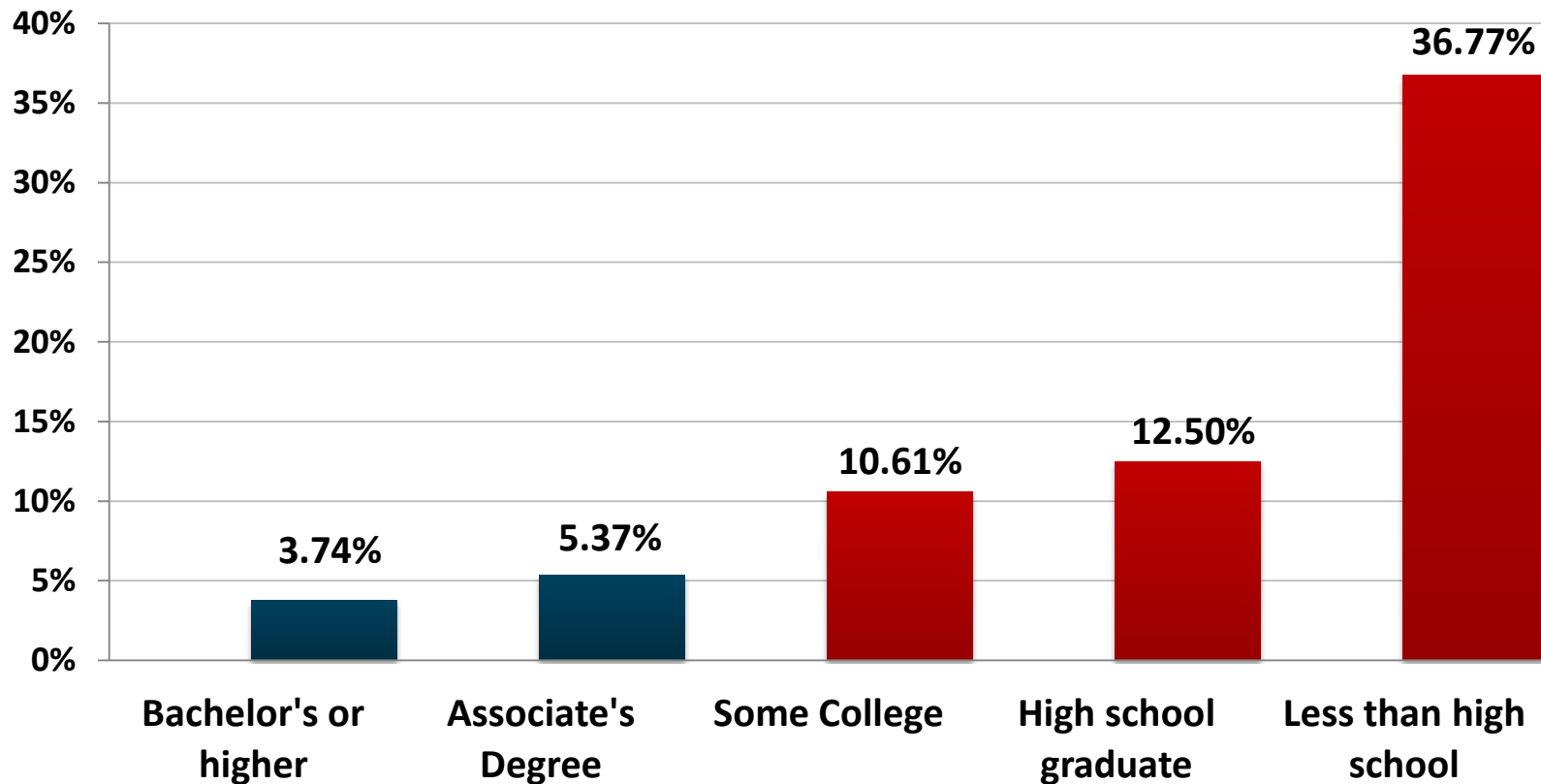
Source: Bureau of Justice Statistics. Federal Justice Statistics, Statistical Tables, November 2010.





# The Need for Public Assistance Correlates with Level of Educational Attainment

Percentage of Kentucky Population on Medicaid by Education Levels



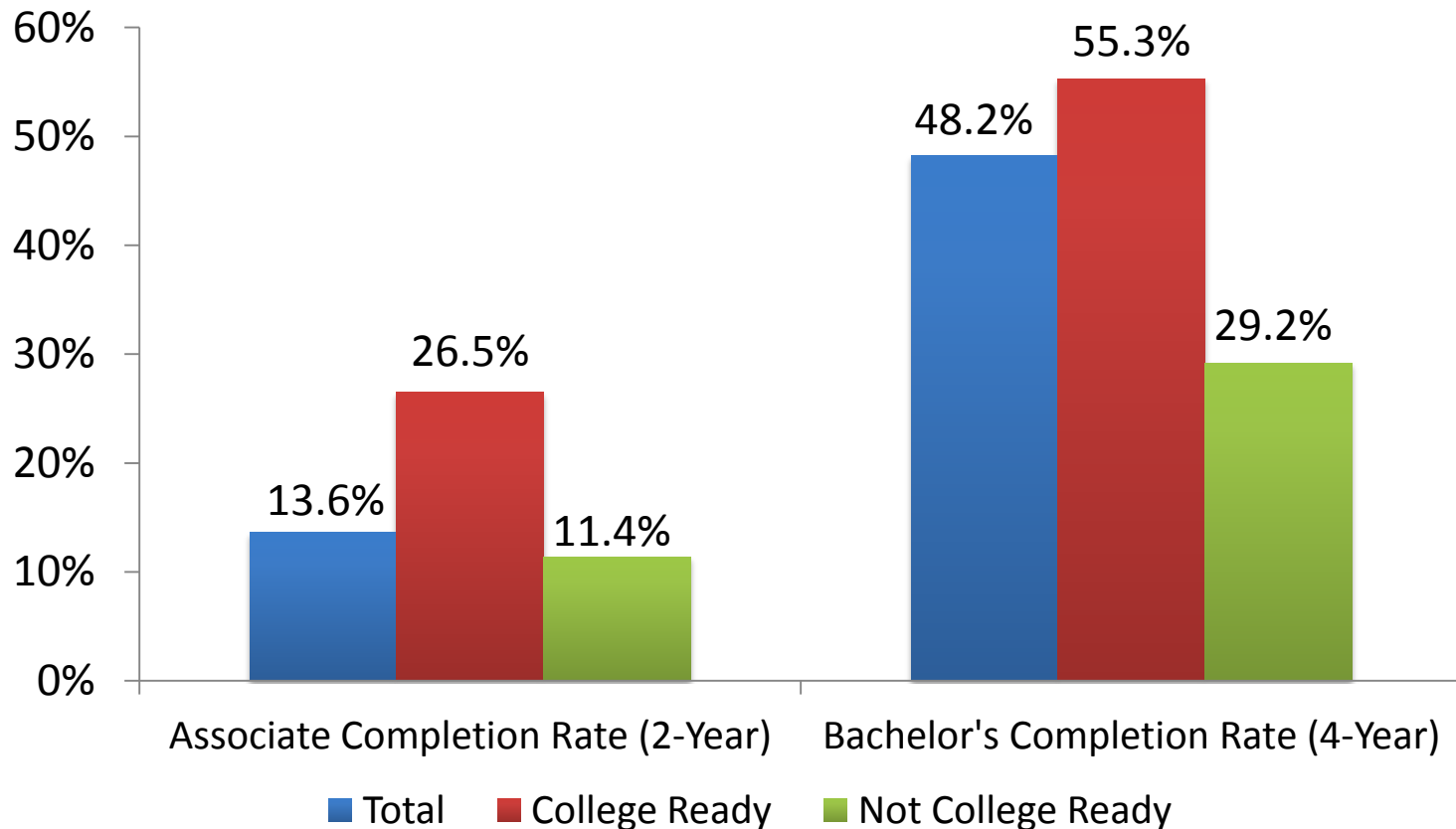
Source: March 2012 Current Population Supplement, Current Population Survey (CPS)



# Kentucky's Graduation Rate Gaps

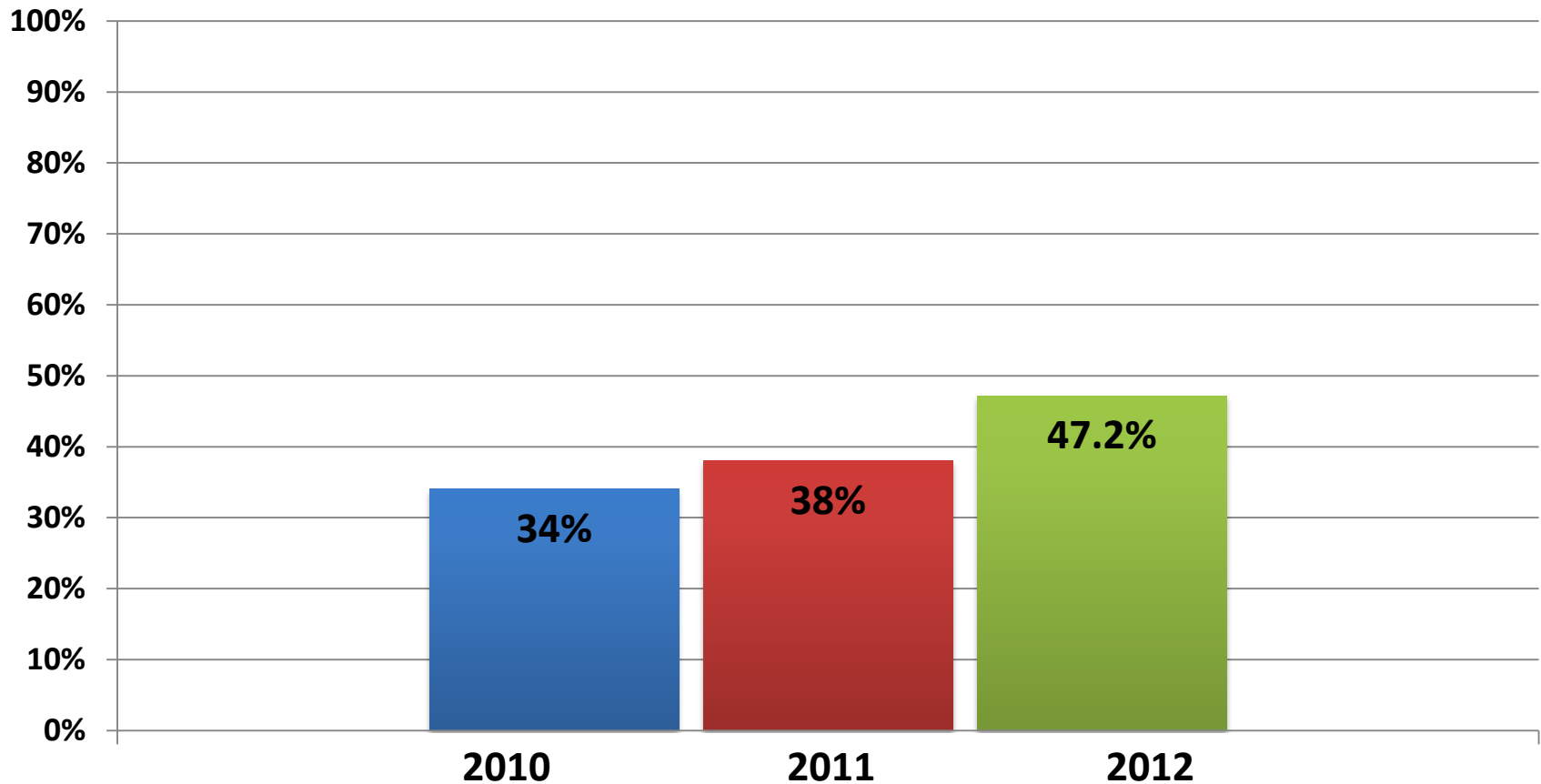
## Underprepared Students

System completion rates of full-time, first-time associate and baccalaureate students who entered a Kentucky public or independent university and completed a degree at any in-state public or independent institution, by college readiness at entry.



# Kentucky's College and Career Readiness Success

The number of high school graduates ready for college has steadily been increasing



Source: Dodd, Karen. "Stocktake Summary for College and Career Readiness Delivery Plan." Kentucky Department of Education. Oct 2012.



***“Teaching quality is recognized as the most powerful school-based factor in student learning. Quality teaching outweighs students’ social and economic background in accounting for differences in student achievement.”***

**- Alliance for Excellent Education**

*Source: “A Systematic Approach to Building a World-Class Teaching Profession: The Role of Induction.”*

***“Principals play a major role in developing a ‘professional community’ of teachers who guide one another in improving instruction.”***

**- The Wallace Foundation**

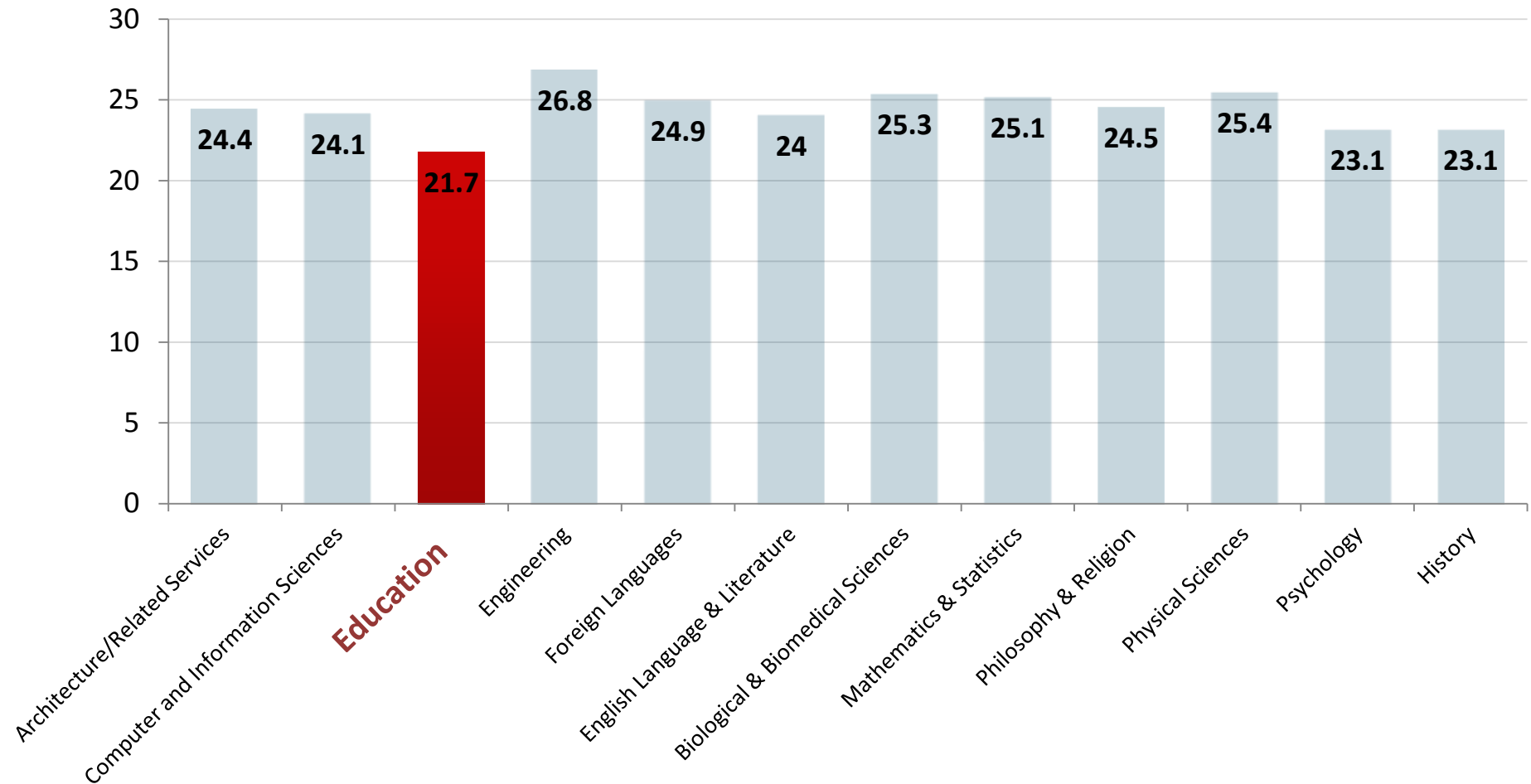
*Source: “The School Principal as Leader: Guiding Schools to Better Teaching and Learning.”*

- In the countries where students perform the best academically, teachers typically come from the **top 25 percentile** of students.
- The teaching profession is **prestigious**, and schools of education are **selective**.
- In the United States, teachers tend to be the lowest academic performers (bottom third), especially in elementary education.



# ACT Scores by Major

Fall 2011 Juniors & Seniors at KY 4-Year Public Institutions

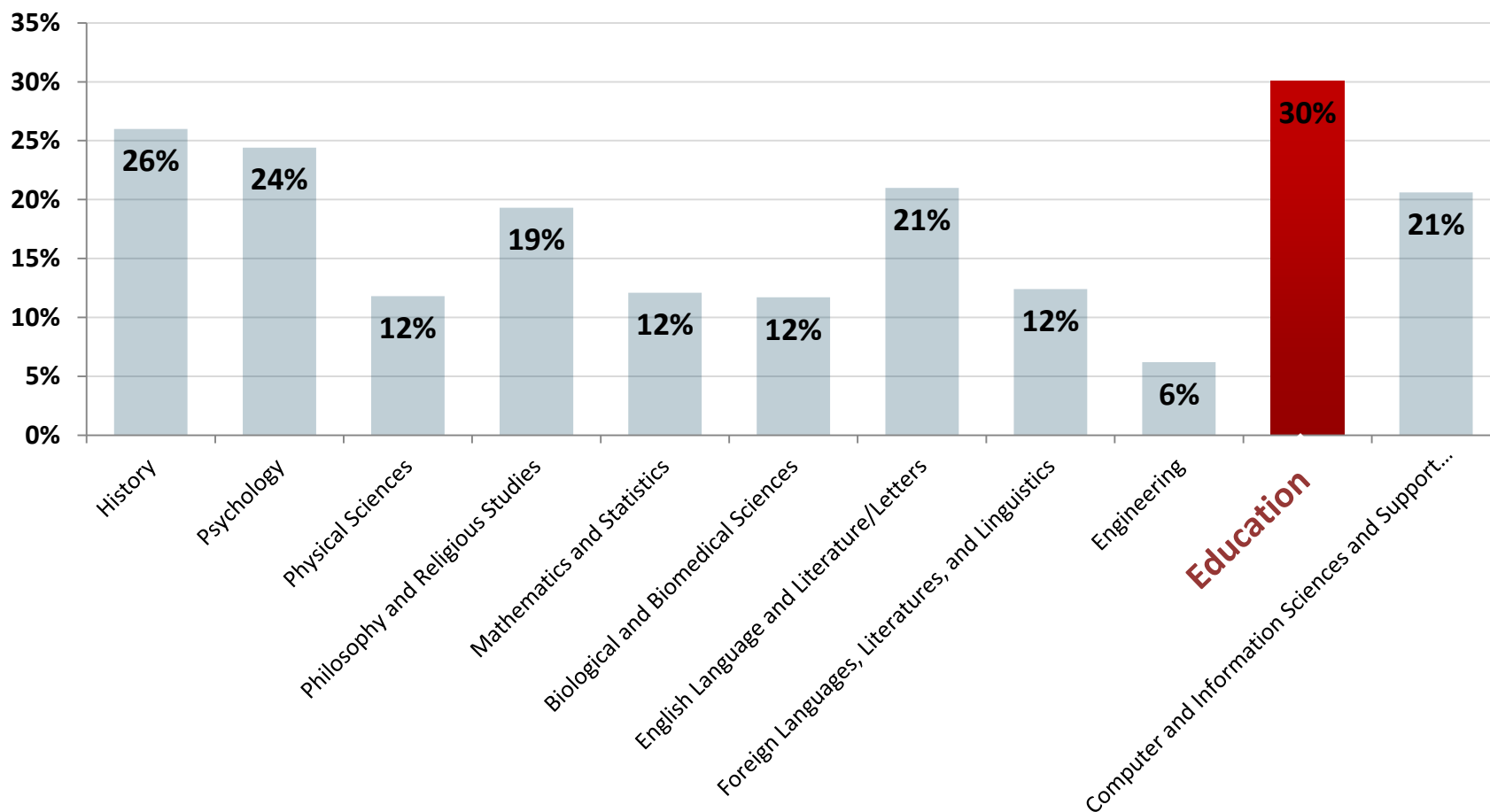


Source: Kentucky Council on Postsecondary Education Comprehensive Database System.



# Underprepared Students in One or More Subject Areas

## Fall 2011 Junior and Senior Status Students at Kentucky 4-Year Public Institutions



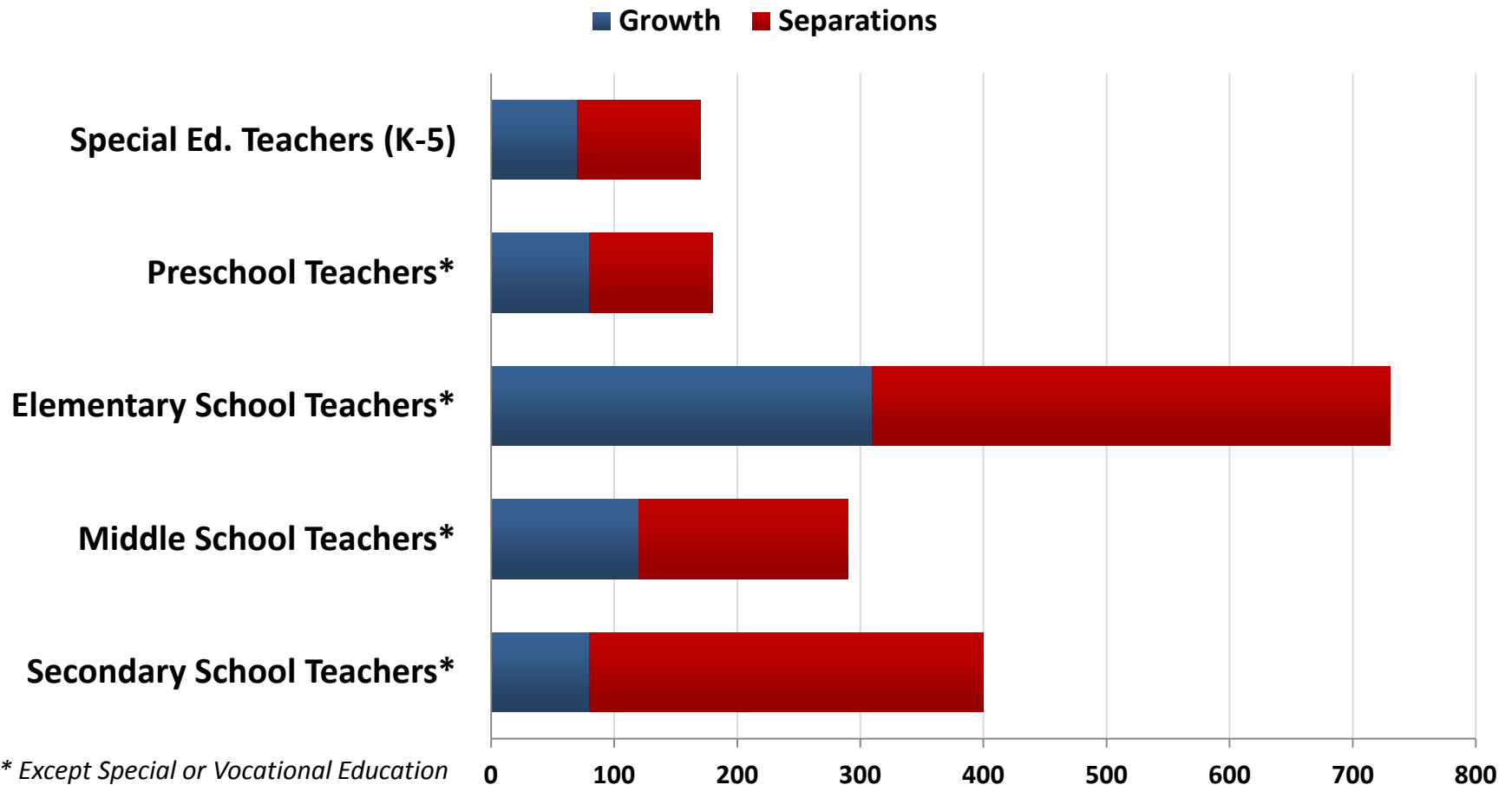
Source: Kentucky Council on Postsecondary Education Comprehensive Database System.





**Workforce turnover results in a significant  
drop in the availability  
of teacher experience as a resource.**

# Kentucky Education Profession's Outlook to 2020



Source: Kentucky Occupational Outlook to 2020, Education Workforce Development Cabinet, Department of Workforce Investment



**So, what are our teachers' needs?**

# Difference in Beginning Teacher PD Need vs. Receipt

Professional Development Area	% Indicating a Need in 2011	% Indicating They Had 10 or More Hours Over the Past Two Years
Differentiating Instruction	74.3	43.8
Special Education (Disabilities)	71.8	25.1
Closing the Achievement Gap	70.4	29.1
Special Education (Gifted/Talented)	67.4	8.1
Reading Strategies	60.9	34.8
Methods of Teaching	58.4	48.1
Student Assessment	58.4	49.5
Classroom Management Techniques	55.9	31.2
Integrating Technology into Instruction	54.9	39.1
Your Content Area	46.0	50.3
English Language Learners	44.9	6.7

Source: TELL Kentucky: Creating Supportive School Conditions for Enhancing Teacher Effectiveness.



**16 Algebra I teachers in KY who volunteered to teach in the pilot board exam project, “Excellence for All,” were asked to solve a sample student question:**

- **If it takes 5 people all painting at the same rate 4 days to paint a house, how long will it take one person?**
- **Write a formula that would allow you to determine how long it would take to paint a house if the variable is the number of painters being used.**



**How many of the 16 teachers solved the  
problems correctly?**

0

**In discussing a famous sonnet, students were asked to define a particular word, or identify a metaphor or simile.**

**They were not asked to discuss the meaning of the sonnet, or how the literary tools of simile and metaphor were used to convey that meaning.**



# **CHALLENGE:**

**Teachers are not learning how to teach  
early enough.**



# Translating Responses into Results

Can you identify the mistakes made here?

(Correct answer is 1225)

a.

$$\begin{array}{r} 49 \\ \times 25 \\ \hline 405 \\ 108 \\ \hline 1485 \end{array}$$

The student added each carried number to the top multiplicand, rather than the total.

$$9 \times 5 = 45$$

$$(\text{Carried } 4 + 4) \times 5 = 40$$

$$2 \times 9 = 18$$

$$(\text{Carried } 1 + 4) \times 2 = 10$$

$$405 + 1080 = 1485$$

b.

$$\begin{array}{r} 49 \\ \times 25 \\ \hline 225 \\ 100 \\ \hline 325 \end{array}$$

The student separated 49 into 4 and 9, then multiplied each by 25.

$$9 \times 25 = 225$$

$$4 \times 25 = 100$$

$$225 + 100 = 325$$

c.

$$\begin{array}{r} 49 \\ \times 25 \\ \hline 1250 \\ 25 \\ \hline 1275 \end{array}$$

The student rounded 49 to 50 and multiplied by 25.

Instead of subtracting the additional 25 (to make 49), the student added it to the total.

$$50 \times 25 = 1250$$

$$1250 + 25 = 1275$$



## **In an informal survey of experienced teachers participating in a train-the-trainer program at the NKU Center for Mathematics:**

- 100% wished that they would have learned these instructional methods and strategies earlier.
- 100% thought that the training they were receiving would be best offered as part of the pre-service curriculum.

# A Systematic Approach to Building a World-Class Teaching Profession



Recruitment



Selectivity



Training



Certification



Induction



Career Ladder



Professional  
Development



Compensation



# Important and Needed Steps in Teacher Preparation

- Develop an aggressive marketing campaign to recruit high-performing students into teaching. Elevate selectivity.
- Redesign teacher training:
  - Elementary educators need deep content, especially in numeracy and literacy.
  - Middle and high school educators need content- specific pedagogy.
- Engage the whole university, not just the schools of education.
- Increase clinical experiences.
- Add a full year of residency at a “teaching hospital” school (earning a Master’s degree).



# Important and Needed Steps for Professional Development

- Improve professional development for school leaders to emphasize academic leadership. Use National Institute for School Leadership (NISL) training.
- Involve Kentucky colleges and universities in the design and provision of research-proven, high-quality, effective professional development.
- Encourage growth of the Kentucky Partnership Academies and Regional Content Leadership Networks. Currently housed at three universities, the goal is to expand this network.



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